

## *Leptodea ochracea* (Tidewater Mucket)

### Priority 1 Species of Greatest Conservation Need (SGCN)

**Class:** *Bivalvia* (Marine And Freshwater Molluscs)

**Order:** *Unionoida* (Freshwater Mussels)

**Family:** *Unionidae* (Freshwater Mussels)

#### General comments:

restricted to portions of three watersheds (Kennebec, Penobscot, St George); typically found in very low densities altho some large populations exist

#### Species Conservation Range Maps for Tidewater Mucket:

Town Map: [Leptodea ochracea\\_Towns.pdf](#)

Subwatershed Map: [Leptodea ochracea\\_HUC12.pdf](#)

#### SGCN Priority Ranking - Designation Criteria:

##### Risk of Extirpation:

Maine Status: Threatened

**State Special Concern or NMFS Species of Concern: NA**

**Recent Significant Declines: NA**

**Regional Endemic: NA**

**High Regional Conservation Priority:**

Northeast Endangered Species and Wildlife Diversity Technical Committee:

Risk: No, Data: Yes, Area: Yes, Spec: No, Warrant Listing: No, Total Categories with "Yes": 2

Northeast Regional Synthesis (RSGCN):

Responsibility: High, Concern: Very High

**High Climate Change Vulnerability: NA**

**Understudied rare taxa: NA**

**Historical: NA**

**Culturally Significant: NA**

#### Habitats Assigned to Tidewater Mucket:

##### Formation Name      Freshwater Aquatic

**Macrogroup Name      Lakes and Ponds**

**Habitat System Name:** Eutrophic    **\*\*Primary Habitat\*\***

**Habitat System Name:** Mesotrophic or Intermediate    **\*\*Primary Habitat\*\***

**Habitat System Name:** Oligotrophic    **\*\*Primary Habitat\*\***

**Macrogroup Name      Rivers and Streams**

**Habitat System Name:** Headwaters and Creeks    **Notes: not a headwater stream specialist**

**Habitat System Name:** Large River    **\*\*Primary Habitat\*\***

**Habitat System Name:** Medium River    **\*\*Primary Habitat\*\***

**Habitat System Name:** Small River    **\*\*Primary Habitat\*\***

#### Stressors Assigned to Tidewater Mucket:

Stressor Priority Level based on Severity and Actionability		Moderate Severity	High Severity
	Highly Actionable	Medium-High	High
	Moderately Actionable	Medium	Medium-High
	Actionable with Difficulty	Low	Low

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#### IUCN Level 1 Threat      Other Options

**IUCN Level 2 Threat:** Lack of knowledge

**Severity:** Moderate Severity

**Actionability:** Highly actionable

**Notes:** Lack of comprehensive survey effort and monitoring to identify status and trends of individual populations

#### IUCN Level 1 Threat      Agriculture and Aquaculture

**IUCN Level 2 Threat:** Annual and Perennial Non-timber crops

**Severity:** Moderate Severity

**Actionability:** Moderately actionable

**Notes:** In riparian zone where forest canopy is lost or degraded

#### IUCN Level 1 Threat      Biological Resource Use

**IUCN Level 2 Threat:** Logging and Wood Harvesting

**Severity:** Moderate Severity

**Actionability:** Moderately actionable

**Notes:** In riparian zone where forest canopy is lost or degraded; instream where sunken logs are salvaged

#### IUCN Level 1 Threat      Invasive and Other Problematic Species, Genes and Diseases

**IUCN Level 2 Threat:** Invasive Non-native-Alien Species-Diseases

**Severity:** Moderate Severity

**Actionability:** Moderately actionable

**Notes:** Zebra mussel and Asian clam are potential threats - not yet documented in Maine but are present in other New England states; prevention/outreach programs could be increased but once established would likely be irreversible; invasive aquatic plants can alter/degrade habitat

#### IUCN Level 1 Threat      Natural Systems Modifications

**IUCN Level 2 Threat:** Dams and Water Management-Use

**Severity:** Moderate Severity

**Actionability:** Moderately actionable

**Notes:** Dams alter habitat, can block fish hosts and potentially fragment populations; can also create habitat; drawdowns for dam maintenance and repair can cause direct mortality and downstream sedimentation; water withdrawals for irrigation or other large scale consumptive uses

#### IUCN Level 1 Threat      Pollution

**IUCN Level 2 Threat:** Agricultural and Forestry Effluents

**Severity:** Moderate Severity

**Actionability:** Moderately actionable

**Notes:** Impacts to water quality from point and non-point sources; direct impacts of toxins to mussels and/or fish hosts

**IUCN Level 2 Threat:** Domestic and Urban Waste Water

**Severity:** Moderate Severity

**Actionability:** Moderately actionable

**Notes:** Impacts to water quality from point and non-point sources; direct impacts of toxins to mussels and/or fish hosts

**IUCN Level 2 Threat:** Industrial and Military Effluents

**Severity:** Moderate Severity

**Actionability:** Moderately actionable

**Notes:** Impacts to water quality from point and non-point sources; direct impacts of toxins to mussels and/or fish hosts

#### IUCN Level 1 Threat      Residential and Commercial Development

**IUCN Level 2 Threat:** Commercial and Industrial Areas

**Severity:** Moderate Severity

**Actionability:** Moderately actionable

**Notes:** In riparian zone where forest canopy is lost or degraded and/or water quality is impacted; in stream bed where increased access/use directly impacts stream bottom and/or water quality

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#### IUCN Level 1 Threat Residential and Commercial Development

**IUCN Level 2 Threat:** Housing and Urban Areas

**Severity:** Moderate Severity

**Actionability:** Moderately actionable

**Notes:** In riparian zone where forest canopy is lost or degraded and/or water quality is impacted; in stream bed where increased access/use directly impacts stream bottom and/or water quality

#### IUCN Level 1 Threat Transportation and Service Corridors

**IUCN Level 2 Threat:** Roads and Railroads

**Severity:** Moderate Severity

**Actionability:** Moderately actionable

**Notes:** In riparian zone where forest canopy is lost or degraded; in stream corridor where stream banks, bottom or water quality are impacted (e.g., bridge crossings, road improvements/maintenance); impacts to fish host distribution from culverts

**IUCN Level 2 Threat:** Utility and Service Lines

**Severity:** Moderate Severity

**Actionability:** Moderately actionable

**Notes:** In riparian zone where forest canopy is lost or degraded; in stream corridor where utility crossing impacts stream bed

### Species Level Conservation Actions Assigned to Tidewater Mucket:

*\*Only species specific conservation actions that address high (red) or medium-high (orange) priority stressors are summarized here.*

<b>Conservation Action</b>	<b>Category:</b> Survey and Monitoring	<b>Biological Priority:</b> critical	<b>Type:</b> new
Develop and implement a systematic protocol for monitoring population size, demographics, and trends.			

#### Stressor(s) Addressed By This Conservation Action

Lack of knowledge

### Guild Level Conservation Actions:

This Species is currently not attributed to a guild.

### Broad Taxonomic Group Conservation Actions:

Additional relevant conservation actions for this species are assigned within broader taxonomic groups in Maine's 2015 Wildlife Action Plan: Element 4, Table 4-1.

### Habitat Based Conservation Actions:

Additional conservation actions that may benefit habitat(s) associated with this species can be found in Maine's 2015 Wildlife Action Plan: Element 4, Table 4-15. Click on the Habitat Grouping of interest to launch a habitat based report summarizing relevant conservation actions and associated SGCN.

*The Wildlife Action Plan was developed through a lengthy participatory process with state agencies, targeted conservation partners, and the general public. The Plan is non-regulatory. The species, stressors, and voluntary conservation actions identified in the Plan complement, but do not replace, existing work programs and priorities by state agencies and partners.*